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Part III

Department of Agriculture

Cooperative State Research Service

Competitive Research Grants Program for Fiscal Year 1989; Solicitation of Applications for the Competitive Research Grants Program; Notice

DEPARTMENT OF AGRICULTURE

Cooperative State Research Service

Competitive Research Grants Program for Fiscal Year 1989; Solicitation of Applications for the Competitive Research Grants Program

Applications are invited for competitive grant awards under the Competitive Research Grants Program administered by the Office of Grants and Program Systems, Cooperative State Research Service, for fiscal year 1989.

The authority for this program is contained in section 2(b) of the Act of August 4, 1965, as amended (7 U.S.C. 450i(b)). Under this program, *subject to the availability of funds,* the Secretary may award competitive research grants for periods not to exceed five years for support of research projects to further the programs of the Department of Agriculture. Proposals may be submitted by any State agricultural experiment station, college, university, other research institution or organization, Federal agency, private organization, corporation, or individual. Proposals from scientists at non-United States organizations will not be considered for support.

Applicable Regulations

Regulations applicable to this program include the following: (a) The regulations governing the Competitive Research Grants Program, 7 CFR Part 3200 (49 FR 5570, February 13, 1984, as amended by 50 FR 5499, February 8, 1985), which set forth procedures to be followed when submitting grant proposals, rules governing the evaluation of proposals and the awarding of grants, and regulations relating to the post-award administration of grant projects; and (b) the USDA Uniform Federal Assistance Regulations, 7 CFR Part 3015, as amended.

Specific Research Areas To Be Supported in Fiscal Year 1989

Standard project grants and a small number of continuation grants will be awarded to support basic research in selected areas of the biological sciences related to agriculture and human nutrition.

The Competitive Research Grants Program covers the following categories: Plant Science, Human Nutrition, Animal Science, Biotechnology, Pest Science, Depletion of Stratospheric Ozone as related to crop productivity.

The research categories of plant and animal science and human nutrition have been considered by a number of scientific groups to possess exceptional opportunity for fundamental scientific discovery and for contributing, in the long run, to applied research and development vitally needed on high-priority food and nutrition problems.

The major initiative in biotechnology research that began in fiscal year 1985 will continue for fiscal year 1989. It is designed to provide opportunities to address research problems in all categories of agricultural science including plants, animals, trees, insect pests, and microorganisms associated with these biota. It is anticipated that this research will advance broadly the Nation's competitive advantage in the food, feed, fiber and natural resource processes. Consideration will be given to research proposals that address fundamental questions in the areas noted below and that are consistent with the long-range agricultural needs of the Nation. Biotechnology proposals should be submitted to the research program area listed below that is most appropriate.

It is anticipated that funds will be made available in fiscal year 1989 to support a new research initiative on the investigation of effects of changes in stratospheric ozone and associated changes in UV–B radiation on crop plants and trees. The U.S. is joining an international effort to address the growing concern that the reduced levels of stratospheric ozone in recent years may indicate a long-term trend. The objective is to determine effects of these changes on fundamental life processes associated with the productivity of plants of agricultural importance, thereby providng baseline information that will be needed for the assessment of the environmental changes anticipated. The new initiative represents the Cooperative State Research Service's part in this joint effort.

While basic guidelines are provided to assist members of the scientific community in assessing their interest in the program areas and to delineate certain important areas where new information is vitally needed, the guidelines are not meant to provide boundaries within which proposals should be submitted or to detract from the creativity of potential applicants. USDA encourages the submission of innovative projects in the so-called "high-risk" category as well as those that may have a more certain payoff potential. In all instances, innovative research will be given high priority.

Agriculturally important organism(s) should be used to accomplish the research objectives. The use of other organisms as experimental model systems must be justified relative to the goals of the appropriate research program area and to the long-term objectives of USDA.

Workshops or symposia that bring together scientists to identify research needs, update information, or advance an area of research are recognized as integral parts of research efforts. Support for a limited number of such meetings covering subject matter encompassed by this Competitive Research Grants solicitation will be considered for partial or, if modest, full support. Proposals for workshops and symposia should be submitted to the appropriate program area listed below. An applicant considering submission of a workshop of symposia proposal is strongly advised to contact the responsible Associate Program Manager at the appropriate telephone number given below before preparing their proposal.

Individual Postdoctoral Research Awards

USDA encourages individuals to apply for a Competitive Research Grant who: (1) Have earned the doctoral degree in a biological science or related areas after January 1, 1986, or will have earned the degree no later than June 7, 1989; (2) are United States citizens; (3) have obtained a commitment from a State agricultural experiment station, college, university, other research institution or oganization, Federal agency, private organization, or corporation for the conduct of research; (4) have made prior arrangements for research with a scientific advisor at the institution where the research will be conducted; and (5) have interests in research that fall within the program areas described in this solicitation. We encourage recently graduated scientists specifically to develop independent research programs of their own, not to merely supplement ongoing research of a senior investigator. While such individuals are encouraged to submit proposals for competitive grants, it must be noted that no preference is given to such individuals in determining the grant awards. All individuals and eligible entities, whether or not they meet the above criteria, are welcome to submit proposals, and their proposals will be evaluated objectively under the applicable award criteria. Interested potential applicants should contact the responsible Associate Program Manager at the appropriate telephone number given below for further information.

The following specific research areas (program areas) and guidelines are

provided as a base from which proposals may be developed:

1.0 Plant Biological Stress Including Molecular Plant Pathology, Entomology and Nematology. Plants are exposed to many stresses that may adversely affect their productivity and usefulness to man. This program area will support research on stresses on plants arising from their interactions with other plants or other biological agents such as weeds, insects, nematodes, fungi, bacteria, viruses, and mycoplasma-like organisms. The ultimate goal of the research supported in this area is to reduce losses in plant productivity from damage caused by biologically-generated stresses. This program area will emphasize studies that enhance our understanding of: (a) How stressful interactions are established between plants and other biological agents; (b) how plants react to stresses generated by interactions with biological agents; and (c) how damage from such interactions may be reduced or eliminated. The interactions may be studied at any level (i.e., population, organismal, cellular, and molecular) and by various approaches including genetics, molecular biology, and biochemistry.

Within this context, one of the goals of this program area is to understand the molecular basis for the organism's response to these stresses and to identify which of the genetic systems involved in these responses can be manipulated by techniques in biotechnology. Research on plants, plant-associated insects or microorganisms should emphasize: (a) Identification, isolation, transfer, regulation, and expression of genes involved in biological stresses; (b) physiological/biochemical-genetic analyses of identified genes or gene products involved in biological stress; and (c) fundamental or molecular mechanisms underlying stress responses, injury, tolerance, and avoidance at the molecular, cellular, and organismal levels.

Proposals may include studies on plants separated from stress-causing organisms or on stress-causing organisms separated from their target plants. However, proposals should indicate how the anticipated information will be relevant to an understanding of the causes, consequences, and avoidance of biologically generated stresses on plants. The research supported in this program area will focus on the identification of new approaches that will be both effective and compatible with social and environmental concerns.

To expedite processing and review of the large number of proposals submitted in the broad subject area of Plant Biological Stress, proposals will be evaluated under two subprogram areas:

1.1 *Plant Pathology/Weed Science* and

1.2 *Entomology/Nematology,* each of which will have a separate deadline date for submission of proposals.

Within the guidelines described above, the Plant Pathology/Weed Science subprogram area will consider all proposals for research addressing plant pathogens or weeds affecting plant stress. The Entomology/Nematology subprogram area will consider all proposals for research addressing arthropods or nematodes stressing the plant.

2.0 Plant Genetic Mechanisms and Plant Molecular Biology. The goal of this program area is to encourage new approaches for the development of genetically superior varieties of agricultural crops. One of the major limiting factors for the application of biotechnology to agriculture is the lack of basic information about genes. Studies addressing the basic cellular, molecular, and genetic processes which contribute new information required for the development of novel approaches to crop improvement will be given high priority. This program area will emphasize the following but will not exclude other new or unusual approaches to crop improvement: (a) Identification, isolation, and characterization of genes and gene products; (b) relationships between gene structure and function; (c) regulatory mechanisms of gene expression; (d) interactions between nuclear and organellar genes, and between extrachromosomal and chromosomal genes; (e) mechanisms of gene recombination and transportation; (f) molecular basis of chromosomal replication; (g) cell and tissue culture studies designed to increase our knowledge of the basic molecular, biochemical, and cellular processes involved in regenerating whole plants from single cells; (h) development of cellular and molecular methods for identifying plant characteristics or genes which are important targets for genetic manipulation; (i) development of molecular and cellular methods for crop improvement that involve gene transfer or genetic engineering technology; (j) development of new methods for producing, selecting, and transferring agronomically important qualitative and quantitative traits; and (k) basic genetic studies on the alteration and utilization of unadapted and wild germplasm.

3.0 Biological Nitrogen Fixation and Metabolism. The most common limiting nutrient for plant growth is nitrogen. The objectives of this program are to support research which will elucidate basic mechanisms of the many processes affecting the nitrogen status of crop plants, including biological nitrogen fixation, uptake, transport and metabolism of nitrogenous compounds. Innovative answers to problems in these areas are sought from disciplines of biochemistry, molecular biology and biotechnology, cellular and developmental biology, microbiology, genetics, physiology and ecology. These areas include but are not necessarily limited to, the following types of research: (a) Studies on the properties, mechanisms, contributions to nitrogen-fixation in both free-living and symbiotic nitrogen-fixing organisms; (b) molecular and developmental studies on mechanisms and regulation of infection and nodulation of roots by symbiotic nitrogen-fixing organisms; (c) factors controlling symbiont specificity; (d) competitive interactions of nitrogen-fixing organisms with other soil organisms; (e) structural, mechanisms and regulatory studies of enzymes involved in nitrogen metabolism, including nitrogen fixation and its utilization; (f) studies on nitrification and denitrification; (g) studies on factors influencing uptake and mechanisms of uptake of nitrogenous compounds; and (h) metabolic studies on processes affecting the nitrogen status of the plant.

4.0 Photosynthesis. Photosynthetic efficiency is an important factor in crop productivity. Basic research that provides information on limiting processes of photosynthesis and associated carbon metabolism will lead to a greater understanding of those factors that affect the ability of the plant to produce a usable product.

Research is needed in the following major subareas: (a) Genetic and cellular manipulation to improve photosynthetic efficiency in plants including studies of the chloroplast and nuclear genomes, analyses of regulatory steps controlling both nuclear and extranuclear photosynthetic gene expression and their interactions; (b) aspects of photosynthetic energy conversion, including such areas as early events in photon capture by photosynthetic systems and the mechanisms of charge separation, the structure and function of photosynthetic membranes and membrane constituents, and the associated chemical and physical reactions; (c) photosynthetic carbon assimilation including mechanisms of CO_2 fixation, biochemistry and

molecular biology of photosynthetic and related biosynthetic pathways, photorespiration, and aspects of cellular metabolism regulating these reactions; (d) control of photosynthate partitioning, translocation, and utilization; (e) development and senescence of the photosynthetic apparatus; and (f) photosynthetic process in leaves, whole plants, and canopies including, but not limited to; involvement of the stomatal apparatus.

Other research designed to generate new information leading to a basic understanding of photosynthesis and its accompanying processes also may be considered a part of this program.

5.0 *Molecular and Cellular Mechanisms of Plant Growth and Development.* Suboptimal growth and development are limiting factors in plant productivity. A basic understanding of developmental processes in agriculturally important plants is largely lacking, but new experimental approaches are being developed through advances in molecular and cellular biology. The goal of this program area is to fill in the gap in our knowledge concerning the fundamental mechanisms that underlie plant growth and development. This research area will place emphasis on, but not be limited to, studies of: (a) Mechanisms controlling plant growth and development including flowering, fertilization, embryogenesis, germination, differentiation, organogenesis, and senescence; (b) developmental regulation of gene expression; (c) photomorphogenesis; (d) cell biology including membrane biology; and (e) biochemistry of cellular metabolism membrane biology; and (e) biochemistry of cellular metabolism related to plant growth and development. This program area encourages the use of emerging experimental techniques for the investigation of these developmental processes.

6.0 *Genetic and Molecular Mechanisms Controlling Plant Responses to Physical and Environmental Stresses.* Physical stresses prevent the expression of the full genetic potential of an organism's productivity and set limits on where and when it thrives. A major goal of this program area is to understand the molecular and cellular bases for the organism's responses to these stresses and to identify which of the genetic systems involved in these responses can be manipulated. Research on plants should emphasize: (a) Identification, isolation, transfer, and expression of genes that are regulated by, or involved in, stresses; (b) physiological-genetic and biochemical-genetic analyses of identified genes or genomic segments that are likely to affect performance under stress; (c) molecular mechanisms underlying coordination of organismal responses to stress; (d) fundamental mechanisms of stress responses, injury, tolerance, and avoidance at the molecular, cellular, and organismal levels; and (e) laboratory and field investigations on the physiology of the organism that contributes to an understanding of the causes, consequences, and avoidance of stresses, rather than simply describing the effects of stress.

7.0 *Human Nutrition.* Proposals are invited in the area of human requirements for nutrients. Support will not be provided for clinical research, demonstration or action projects, nor for surveys of the nutritional status of population groups.

Research in this program area is intended to contribute to the improvement of human nutritional status by increasing our understanding of requirements for nutrients. The objective is to support basic, creative research that will help to fill gaps in our knowledge about nutrient requirements, bioavailability, the interrelationships of nutrients, and the nutritional value of foods that are consumed in the U.S. and of the nutrient condition of healthy individuals as all of these relate to human nutrient requirements. Studies of the biochemical and molecular bases for nutrient requirements are encouraged answering questions as to why a particular nutrient is required and what its function is in the cell. Also, studies of the molecular biology of factors interacting with nutrients, such as receptors, carrier proteins and binding proteins are encouraged.

The use of animals as model systems should be justified.

Proposals dealing with processing techniques in food technology should be clearly oriented toward determination of human nutrient requirements. Proposals that concern utilization or production of a food commodity should emphasize the relationship to specific human nutrient requirements. It is especially important that proposals emphasize innovative, fundamental research.

8.0 *Animal Science (Animal Reproductive Research).* Suboptimal reproductive performance in domestic farm animals is the major factor limiting more efficient production of animal food products. This failure to achieve maximum reproductive efficiency is due to problems related to puberty, ovulation, corpus luteum formation and function, insemination, fertilization, prenatal death, and poor survival of offspring.

The economic loss to the producer and increased costs of animal food products to the consumer due to inefficient reproductive performance makes the requirement for new knowledge in this area a high priority. Although the exact needs may vary from species to species and region to region, there are areas where additional fundamental research is crucial.

This program area will support innovative research in the following categories: (a) Mechanisms affecting embryo survival, endocrinological control of embryo development, mechanisms of embryomaternal interactions, and embryo implantation; (b) gamete physiology, primarily gametogenesis including maturation processes, follicle growth, ovulation, corpus luteum formation and function, and superovulation; fundamental processes of fertilization, mechanisms regulating gamete survival *in vitro*, and basic questions regarding gamete transport; and (c) parturition, postpartum interval to conception, and neonatal survival.

Emphasis should be given to innovative approaches that may contribute to a thorough understanding of the reproductive processes in animals primarily raised for food and fiber production or that otherwise contribute to the agricultural enterprise of the country.

The use of experimental model systems should be justified relative to the objectives of this research.

Proposals on the development of methods for *in vitro* manipulation and preservation of animal gametes and embryos will be considered, but overall objectives of such studies should be related to the development of fundamental knowledge.

9.0 *Animal Molecular Biology and Brucellosis.* One of the major limiting factors for the application of biotechnology to agriculture is the lack of basic information about genes. The primary objective of this program area is to increase our understanding of the structure, organization, function, regulation, and expression of genes in animals and in their associated infectious agents and microorganisms.

This program area will emphasize the following categories of research: (a) Identification, isolation, characterization, and expression of genes and gene products; (b) relationships between gene structure and function; (c) regulatory mechanisms of gene expression; (d) interactions

between nuclear and organellar genes, and between extrachromosomal and chromosomal genes; (e) mechanisms of gene recombination and transposition; (f) molecular basis of chromosomal replication; and (g) mechanisms of interaction of animals with beneficial or deleterious microorganisms or infectious agents. Proposals involving free-living insects that are *not* vectors of animal disease will *not* be considered.

This program area also will support research at the molecular, cellular, and genetic levels that will (a) define the mechanisms by which *Brucella abortus* induces disease in cattle and persists as an infectious agent and (b) define the basis of the bovine immune response with *B. abortus* that results in protective immunity. Proposals also are encouraged which, through molecular biological techniques, identify and produce: (a) Antigens to differentiate among non-infected, vaccinated, and the *B. abortus* infected cattle and (b) immunogens that stimulate long-lived protective immunity in cattle.

The program encourages additional basic research directed toward understanding the genetic and molecular mechanisms controlling animal responses to physical and biological stresses. Topics include the organism's interaction with these stressces and identification of the genetic systems involved in the interaction that can be manipulated through molecular genetic techniques. Research may emphasize: (a) identification, isolation, transfer, and expression of genes or gene systems that are regulated by, or involved in, stress; (b) biochemical genetic analysis of genome segments that are likely to affect performance under stress; (c) molecular mechanisms underlying coordination of organismal responses to stress; and (d) fundamental mechanisms of stress responses at the molecular level.

10.0 *Molecular and Cellular Mechanisms of Animal Growth and Development.* Suboptimal growth and development are limiting factors in animal productivity. Yet, a basic understanding of the development processes in agriculturally important animals is largely lacking. New experimental approaches are being developed through advances in molecular and cellular biology. The goal of this program area is a basic understanding of the developmental processes in agriculturally important animals as well as an increased fundamental knowledge that will provide a basis for biotechnological manipulation of animal growth and development. This research area will emphasize, but not be limited to, studies of (a) Cellular and molecular mechanisms controlling growth and developmental processes, including reproduction, differentiation, and aging; (b) molecular and cellular biological studies of metabolic processes related to growth and development; and (c) identification of molecular, cellular, and organismal targets for genome manipulation.

This program area also encourages basic research in *Genetic, Molecular, and Cellular Mechanisms Controlling Animal Responses to Physical and Biological Stresses* that impinge upon growth and development. Research should address the molecular basis for the organism's interaction with these stresses and the identification of genetic systems causing these responses which can be manipulated. Research may emphasize: (a) Identification, isolation, transfer, and expression of genes that are regulated by, or involved in, stresses; (b) physiological-genetic and biochemical-genetic analyses of identified genes or genomic segments that are likely to affect performance under stress; (c) molecular and cellular mechanisms underlying coordination of organismal responses to stress; (d) fundamental mechanisms of stress responses, injury, tolerance, and avoidance at the cellular and molecular levels; and (e) cellular physiology of the organism that contributes to an understanding of the causes, consequences, and avoidance of stress, rather than simply describing the physiological effects of stress. Proposals addressing research on infectious agents should be sent to the Animal Molecular Biology panel.

11.0 *Insect Pest Science.* Uncontrolled insect pests are a major factor in reducing crop and forest productivity. Before successful strategies for managing insect pests can be developed, a strong basic insect biology research effort is needed. This program area will support research on behavioral physiology; chemical ecology; endocrinology; population dynamics; genetics; behavioral ecology; insect pathogens, parasites and predators; and epidemiology of beetle-borne pathogens. Proposals bringing a blend of approaches to a specific problem are encouraged. Only studies on the boll weevil/boll worm, pine bark beetle, and gypsy moth will be supported.

12.0 *Alcohol Fuels Research.* Proposals will be considered for research relating to the physiological, microbiological, biochemical, and genetic processes controlling the biological conversion of agriculturally important biomass material to alcohol fuels and industrial hydrocarbons. The scope of this program area includes studies on factors that limit efficiency of biological production of alcohol fuels and the means for overcoming these limitations.

13.0 *Depletion of Stratospheric Ozone as related to Crop Productivity.* As part of a Government-wide effort to address the issue of depletion of stratospheric ozone, this program area is designed to investigate the effect of increased ultraviolet radiation resulting from ozone depletion on crop productivity. The objectives of the program area are to document the fundamental biological changes that take place in plants in response to increased ultraviolet radiation and to elucidate underlying mechanisms for the observed changes. Proposals are solicited on fundamental research addressing the biological processes of crop plants (including trees) that are directly affected by changes in ultraviolet radiation. Examples include the genetics of UV–B resistance in plants and the effects of UV–B on: (a) DNA structure and function, (b) structure and function of cellular and sub-cellular membrane systems, (c) photosynthesis, (d) photomorphogenesis, (e) perception and response mechanisms for environmental signals, and (f) light-controlled interactions of plants with microbes, weeds, and insects.

The submission deadline for this category is listed below. To provide adequate scientific evaluation of proposals that are expected to be diverse, proposals submitted under this category will be reviewed by the peer review panel whose collective expertise is most appropriate to the scientific content of each proposal. Upon receipt of a proposal, the staff of the Competitive Research Grants office will assign it to one of nine plant science peer review panels for scientific review.

Soybean Research

Proposals dealing with fundamental research on soybeans should emphasize research objectives that fit the scientific disciplines of the appropriate program areas noted above.

Soybean proposals will be reviewed and evaluated by the peer panel whose collective expertise is most appropriate to the scientific content of the proposal. Submission deadlines for these program areas (and their corresponding peer review panels) are listed below.

How To Obtain Application Materials

Please note that potential applicants who were on the Competitive Research Grants mailing list for fiscal year 1988, or who recently requested placement on the list for fiscal year 1989, will automatically receive copies of this solicitation, the Grant Application Kit, and the regulations governing the Competitive Research Grants Program, 7 CFR Part 3200 (49 FR 5570, February 13, 1984, as amended). All others may request copies from: Proposal Services Unit, Grants Administrative Management, Office of Grants and Program Systems, Cooperative State Research Service, U.S. Department of Agriculture, Room 303, Aerospace Building, 901 D Street, SW., Washington, DC 20251–2200; telephone: (202) 475–5049.

What to Submit

It is requested that applicants submit an original and 14 copies of each proposal. This number of copies is necessary to permit thorough, objective peer evaluation of all proposals received before funding decisions are made.

Each copy of each proposal must include a Form CSRS–661, "Grant Application," which is included in the Grant Application Kit. Proposers should note that one copy of this form, preferably the original, must contain pen-and-ink signatures of the principal investigator(s) and the authorized organizational representative. Each project description is expected to be complete in itself. It should be noted that *reviewers are not required to read beyond 15 pages of the project description* to evaluate the proposal. Proposals beyond this limit may not be reviewed or may be returned to the applicant. Appendices should be limited to materials that are pertinent to the proposal and should not be used as a way of circumventing the page limit. The vitae of key project personnel should be limited to three (3) pages, including a list of publications for the last five (5) years.

All copies of a proposal must be mailed in one package. Due to the volume of proposals received, proposals submitted in several packages are very difficult to identify. Also, please have each copy of each proposal *securely stapled* in the upper left-hand corner. DO NOT BIND. Information should be typed on one side of the page only. Every effort should be made to ensure that the *proposal contains all pertinent information when initially submitted.* Prior to mailing, compare your proposal with the instructions contained in the regulations governing the Competitive Research Grants Program, 7 CFR Part 3200.

Please be advised that, due to the limited budget, the same investigator is not likely to receive more than one award from the Competitive Research Grants Program within the same fiscal year. Therefore, to minimize the time spent for preparation and review of proposals, submission of more than one proposal from the same principal investigator in the same fiscal year is strongly discouraged.

Where and When to Submit Grant Application

Proposals submitted to the research program areas in this notice (e.g., 2.0 Plant Genetic Mechanisms and Plant Molecular Biology) will be assigned by the staff of the Competitive Research Grants office to the most appropriate peer review panel. If necessary, further information may be obtained from the responsible Associate Program Manager at the appropriate telephone numbers given below. Each research grant application must be submitted to: Competitive Research Grants Program, c/o Grants Administrative Management, Office of Grants and Program Systems, Cooperative State Research Service, U.S. Department of Agriculture, Room 303, 901 D Street, SW., Washington, DC 20251–2200. To be considered for funding during fiscal year 1989, proposals *must be postmarked* by the following dates and received in time to permit adequate peer panel review:

Postmark Dates	Peer Review Panels/Program Areas	Contacts
Dec. 5, 1988	1.1 Plant Pathology/Weed Science	475–4871
Dec. 5, 1988	2.0 Plant Genetic Mechanisms and Plant Molecular Biology	475–5042
Dec. 5, 1988	10.0 Molecular and Cellular Mechanisms of Animal Growth and Development	475–3399
Dec. 12, 1988	4.0 Photosynthesis	475–5030
Dec. 12, 1988	7.0 Human Nutrition	475–5034
Dec. 19, 1988	1.2 Entomology/Nematology	475–5114
Dec. 19, 1988	13.0 Ozone Depletion	475–5042
Jan. 23, 1989	5.0 Molecular and Cellular Mechanisms of Plant Growth and Development	475–5042
Feb. 13, 1989	11.0 Insect Pest Science	475–5114
Feb. 13, 1989	6.0 Genetic and Molecular, Mechanism Controlling Plant Responses to Physical and Environmental Stresses	475–4871
Feb. 27, 1989	8.0 Animal Science (Animal Reproductive Research)	475–5034
Feb. 27, 1989	9.0 Animal Molecular Biology and Brucellosis	475–3399
Feb. 27, 1989	12.0 Alcohol Fuels Research	475–5042
Mar. 6, 1989	3.0 Biological Nitrogen Fixation and Metabolism	475–5030

Special Instructions

The Competitive Research Grants Program should be indicated in Block 7 and the applicable program area should be indicated in Block 8 of Form CSRS–661 provided in the Grant Application Kit. *Select one program area only.* The *number* assigned to the applicable program area also must be cited in Block 8 of Form CSRS–661. A final determination of the program area will be made by the program staff and/or appropriate peer panel

Supplementary Information

The Competitive Research Grants Program is listed in the Catalog of Federal Domestic Assistance under No. 10.206. For reasons set forth in the Final rule-related Notice to 7 CFR Part 3015, Subpart V (48 FR 29115, June 24, 1983), this program is excluded from the scope of Executive Order 12372 which requires intergovernmental consultation with State and local officials. In accordance with the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3504(h)), the collection of information requirements contained in this notice have been approved under OMB Document No. 0524–0022.

The award of any grants under the Competitive Research Grants Program during fiscal year 1989 is subject to the availability of funds.

One copy of each proposal that is *not* selected for funding will be retained for a period of one year. The remaining copies will be destroyed.

Done at Washington, DC, this 6th day of October 1988.

William D. Carlson,

Associate Administrator, Office of Grants and Program Systems, Cooperative State Research Service.

[FR Doc. 88-23593 Filed 10-12-88; 8:45 am]

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H.R. 1467/Pub. L. 100–478

To authorize appropriations to carry out the Endangered Species Act of 1973 during fiscal years 1988, 1989, 1990, 1991, and 1992, and for other purposes. (Oct. 7, 1988; 102 Stat. 2306; 18 pages) Price: $1.00

H.R. 4457/Pub. L. 100–479

To create a national park at Natchez, Mississippi. (Oct. 7, 1988; 102 Stat. 2324; 4 pages) Price: $1.00

S. 1934/Pub. L. 100–480

Judiciary Office Building Development Act. (Oct. 7, 1988; 102 Stat. 2328; 8 pages) Price: $1.00

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